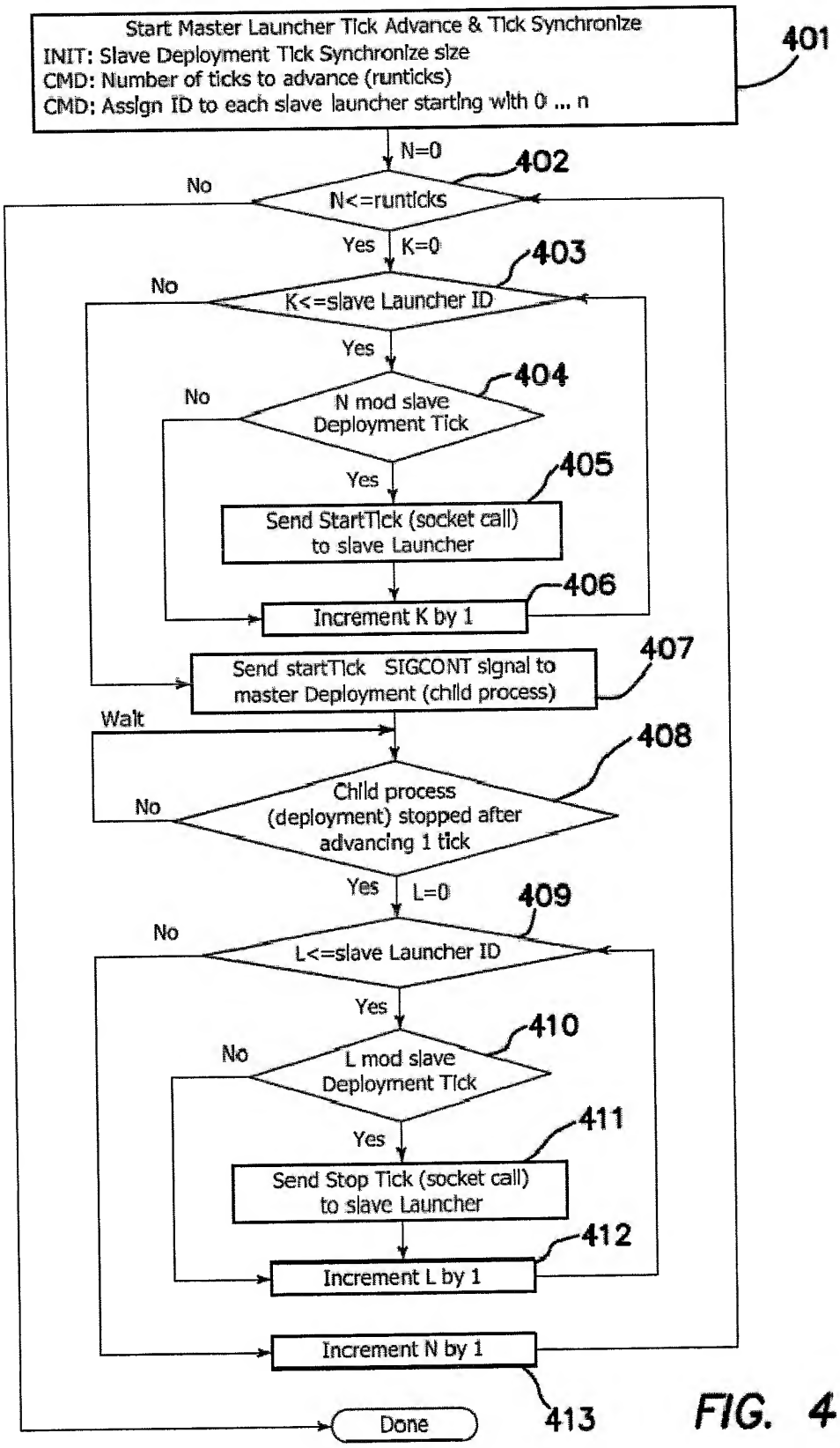
Start Master Launcher Tick Advance & Tick Synchronize
INIT: Slave Deployment Tick Synchronize size
CMD: Number of ticks to advance (runticks)
CMD: Assign ID to each slave launcher starting with 0 ... n
401
N=0
402
No
N<=runticks
Yes
K=0
403
No
K<=slave Launcher ID
Yes
404
No
N mod slave Deployment Tick
Yes
405
Send StartTick (socket call) to slave Launcher
406
Increment K by 1
407
Send startTick SIGCONT signal to master Deployment (child process)
Wait
408
No
Child process (deployment) stopped after advancing 1 tick
Yes
L=0
409
No
L<=slave Launcher ID
Yes
410
No
L mod slave Deployment Tick
Yes
411
Send Stop Tick (socket call) to slave Launcher
412
Increment L by 1
Increment N by 1
413
Done

FIG. 4

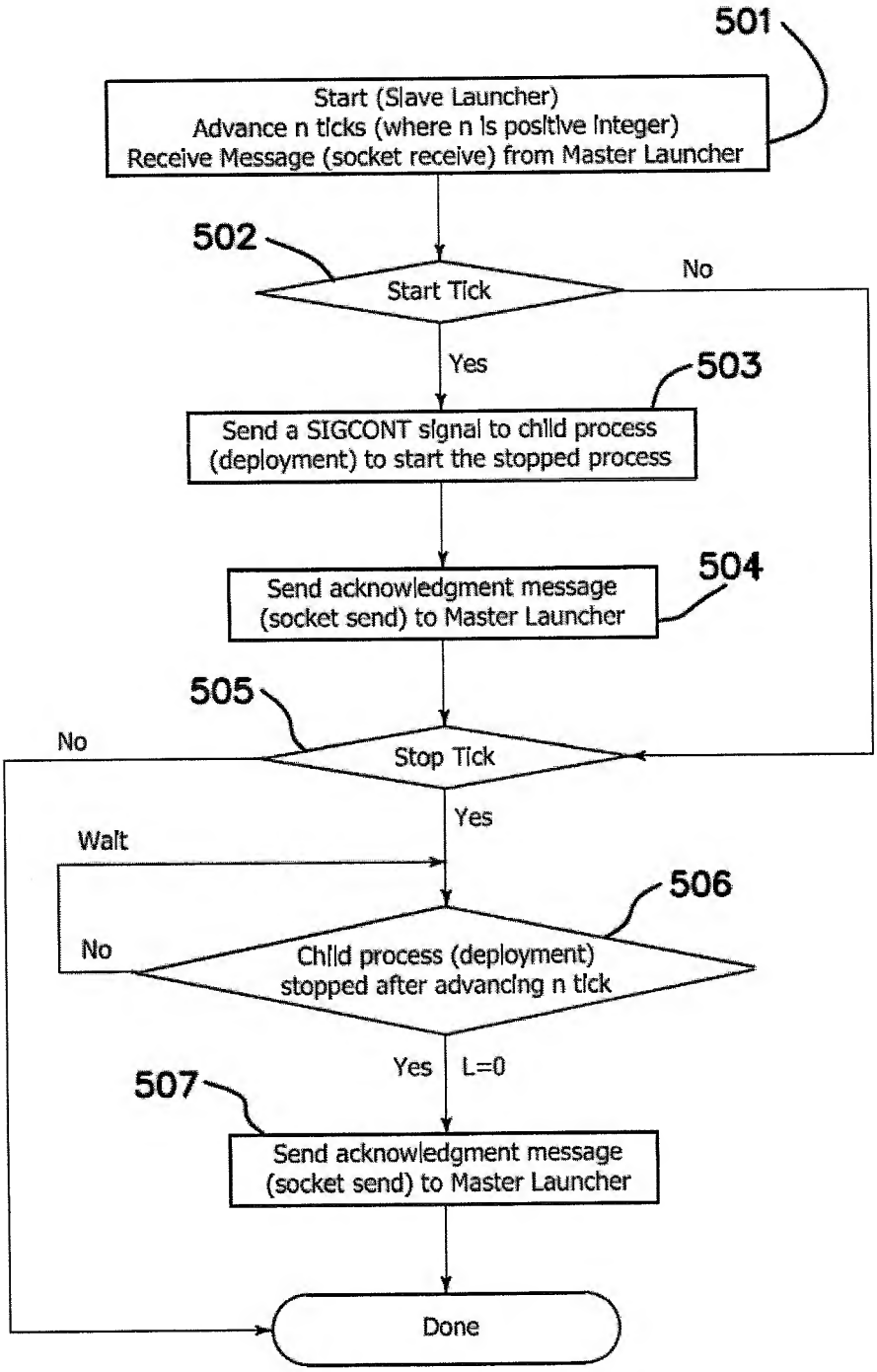
501
Start (Slave Launcher)
Advance n ticks (where n is positive integer)
Receive Message (socket receive) from Master Launcher
502
Start Tick
No
Yes
503
Send a SIGCONT signal to child process
(deployment) to start the stopped process
504
Send acknowledgment message
(socket send) to Master Launcher
505
Stop Tick
No
Yes
Wait
506
No
Child process (deployment)
stopped after advancing n tick
Yes
L=0
507
Send acknowledgment message
(socket send) to Master Launcher
Done

FIG. 5

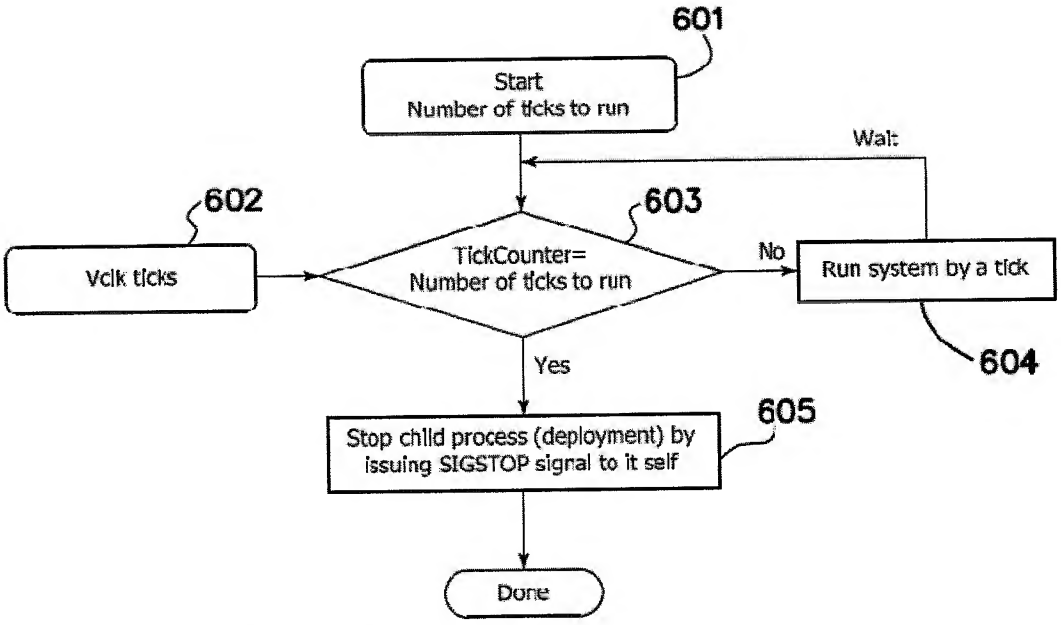
601
Start
Number of ticks to run
Wait
602
Vclk ticks
603
TickCounter=
Number of ticks to run
No
Run system by a tick
604
Yes
605
Stop child process (deployment) by
issuing SIGSTOP signal to it self
Done

FIG. 6